

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT & MANUFACTURER'S DETAILS	
<i>PRODUCT NAME</i> : 6-Chloronicotinic acid	
MANUFACTURER	
<i>FACTORY & REGISTERED OFFICE:</i> Jubilant Organosys Limited, Bhartiagram, Gajraula District: Jyotiba Phuley Nagar Uttar Pradesh-244223 , India PHONE NO: +91-5924-252353 upto 60 Contact Department-Safety: Extension 298 FAX NO : 91-5924-252352 EMERGENCY PHONE: +91-5924-268141	<i>HEAD OFFICE:</i> Jubilant Organosys Limited Plot 1-A, Sector 16-A, Institutional Area, Noida, Uttar Pradesh-201301 India. PHONE NO: +91-120-2516601 Contact department: EHS FAX NO : +91-120-2516629 Email: support@jubl.com

2. CHEMICAL IDENTIFICATION	
• <i>CHEMICAL NAME</i>	: 6-Chloronicotinic acid
• <i>SYNONYMS</i>	: 6-Chloro-3-Pyridinecarboxylic acid, 2-Chloropyridine-5- carboxylic acid 3-Pyridinecarboxylic acid, 6-chloro-
• <i>CHEMICAL CLASSIFICATION</i>	: Aromatic Heterocyclic Compound
• <i>CHEMICAL FORMULA</i>	: C ₆ H ₄ ClNO ₂
• <i>C.A.S. NO.</i>	: 5326-23-8
• <i>EINECS</i>	: 226-201-5

3. HAZARD IDENTIFICATION & HEALTH HAZARD	
• Irritating to the eyes respiratory system and skin.	

4. FIRST AID MEASURES	
Eye: Immediately flush eyes with plenty of water for at least 15 minutes. With eyelid held wide open. Summon medical help.	
Skin: Flush skin with copious amount of water for at least fifteen minutes. Remove and wash contaminated clothing before reuse.	
Inhalation: Remove the affected person (s) to fresh air.	
Ingestion: If swallowed, wash mouth with water. Call a physician.	

5. FIRE FIGHTING MEASURES

Extinguishing media:

In case of fire use water spray, dry chemical powder, foam, carbon dioxide.

Special fire fighting procedure:

In case of fire, wear chemical protective clothing, wear MSHA/NIOSH (approved or equivalent) self-contained breathing apparatus and full protective gear.

Unusual fire and explosion hazard:

Emits toxic and irritating fumes under fire conditions. Hydrochloric acid & nitrogen oxides may develop in event of fire.

6. ACCIDENTAL RELEASE MEASURES

- Evacuate the area.
- Wear respirator, chemical safety goggles, rubber boots & heavy rubber gloves.
- Do not inhale the chemical dust.
- Sweep up and collect material in covered containers and wash spill site after material pick up is complete.
- Avoid draining out in drains or sewers.
- Ensure free supply of fresh air in closed rooms.

7. HANDLING AND STORAGE

- Store at a cool dry place.
- Store in a tightly closed container.
- Keep away from incompatible substances.
- Avoid contact with eyes, skin and clothing.
- Avoid ingestion and inhalation.
- Wash thoroughly after handling.
- Remove contaminated clothing and wash before reuse.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- Use adequate general or local exhaust ventilation.
- Wear protective eyeglasses or chemical safety goggles.
- Wear compatible protective gloves to prevent skin exposure.
- Wear protective clothing.
- Wear NIOSH/MSHA approved respirator.

9. PHYSICO-CHEMICAL PROPERTIES & FIRE/ EXPLOSION

PHYSICAL STATE	: Crystalline powder
APPEARANCE	: Beige brown to Off-white
ODOUR	: Odourless
BOILING POINT	: Data not relevant
MELTING POINT	: 186°C-190°C
FLASH POINT	: 198°C
VAPOUR PRESSURE	: Data not relevant
BULK DENSITY	: 0.45-0.47 gm/cm ³
VAPOR DENSITY (AIR=1)	: Data not relevant
SOLUBILITY IN WATER	: 2.0 gm/lt.(20°C)
pH(2% aqueous suspension)	: 2.9-3.0
FLAMMABILITY	
LEL	: Data not relevant
UEL	: Data not relevant
AUTO IGNITION TEMPERATURE	: Data not relevant
EXPLOSIVE SENSITIVITY TO IMPACTS	: Data not relevant
EXPLOSIVE SENSITIVITY TO STATIC ELECTRICITY	: Data not relevant
COMBUSTIBLE LIQUID	: No
FLAMMABLE MATERIAL	: No
PYROPHORIC MATERIAL	: No
EXPLOSIVE MATERIAL	: No
OXIDISER	: No
ORGANIC PEROXIDE	: No
CORROSIVE MATERIAL	: No
MOLECULAR WEIGHT	: 157.56

10. STABILITY AND REACTIVITY

- Stable under normal temperature and pressure.
- Incompatible with strong oxidising agents, strong acids and alkalis.
- Conditions to avoid: incompatible materials, dust generation, excess heat.
- Hazardous combustion and decomposition products:
Hydrogen chloride, Nitrogen oxide, Carbon monoxide, Irritating and toxic fumes, carbon dioxide & Nitrogen.

11. TOXICOLOGICAL INFORMATION

- **Acute effects:** Cause irritations to skin. Causes irritation in the respiratory tract. Causes irritation in the gastrointestinal tract.
- **Target organs:**
Liver, Kidneys, eyes & heart
- **Toxicity:**
SKN RAT LD50 : >5000 mg/kg
- **Carcinogenicity:**
Not list by ACGIH, IARC, NIOSH, NTP or OSHA

12. ECOLOGICAL INFORMATION

- Ecotoxicity: The full ecotoxicity profile of this product is not known.
- Ecological fate: The total environmental fate of this material is not known. CO₂ is formed from 6-chloronicotinic acid in soil (Scholz, K., Spiteller, M. (1992) Influence of groundcover on the degradation of 14Cimidacloprid in soil. Brighton Crop protection Conference – Pest and Diseases. 883-888., Miles Inc., Imidacloprid: Pesticide leaching potential model. Report No. 105008. 1993).
- The material should not be permitted to enter water bodies.

13. DISPOSAL CONSIDERATION

- Observe all federal, state and local environmental regulations

14. TRANSPORT INFORMATION

Non hazardous as per IATA, IMO & RID/ADR.

15. REGULATORY INFORMATION

European information:

- E.C. NO. # 226-201-5
- R-36/37/38 (Irritating to skin, respiratory system and skin.)
- S-26 (In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.)
- S-36 (wear suitable protective clothing)

US information

- Is listed in the TSCA inventory.
- None of the chemical in this product is listed under TSCA section 12b.
- None of the chemical in this product has an RQ under SARA section 302 RQ.
- None of the chemical in this product has a TPQ under SARA section 302 TPQ.
- None of the chemical in this product is reported under SARA section 313.
- None of the chemical in this product contains any class1 & class2 ozone depleters, neither contains any hazardous air pollutants under 'Clean Air Act'.
- None of the chemical in this product is listed as hazardous substances or priority pollutants or Toxic substances list under 'Clean Water Act'.

16. OTHER INFORMATION

Information contained in this MSDS is believed to be correct but no representation, guarantee or warranties of any kind are made as to its accuracy, suitability for a particular application or results to be obtained from them. This MSDS shall be used as a guide only. JUBILANT ORGANOSYS LIMITED makes no warranties expressed or implied of the adequacy of this document for any particular purpose.

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